

POSITION DUTY STATEMENT

PM-0924 (REV 3/2006)

CLASSIFICATION TITLE Transportation Engineering Technician	DISTRICT/DIVISION/OFFICE North Region Construction – North Area, Redding Materials Lab	
WORKING TITLE Materials Tester	POSITION 928-502-3175-	EFFECTIVE DATE May 2010

As a valued member of the Caltrans team, you make it possible for the Department to improve the mobility across California by being innovative and flexible; reporting to work as scheduled; working cooperatively with team members and others; and treating others fairly, honestly and with respect. Your efforts are important to each member of the team, as well as those we serve.

GENERAL STATEMENT:

Under the general direction of the Area Materials Engineer, Area Construction Engineer, or Senior Transportation Engineer, the Transportation Engineering Technician samples and tests materials, performs R-values tests, California Test Methods, AASHTO test methods, and ASTM test methods, either at the Redding Materials Lab or in the field. May act in a lead worker capacity as needed. Must have a current driver license.

TYPICAL DUTIES:

Percentage Job Description

Essential (E)/Marginal (M)¹

60% (E) Under direction of the Laboratory Lead Worker, performs in a wide variety of technical testing in materials engineering work. Performs materials testing with minimal supervision following California Test Methods, AASHTO test methods, and ASTM test methods. Prepares samples for shipping to Translab or other materials testing laboratories.

Under direction of a Resident Engineer, makes field investigations and laboratory analysis of materials being used in construction projects; makes controlled tests and checks performance of construction materials, soils, aggregates, cement, asphalt, concrete, and other construction materials. Analyzes and approves, or assists in analyzing and approving materials, incorporated in nonstandard major structures; evaluates or assists in evaluating damage, for all types of transportation facilities. Performs tests on construction materials to determine their compliance with the Standard Specifications applicable to the year the job is bid.

15% (E) Logs-in and prepares samples for testing.

15% (E) Throughout District 2, may perform pavement sampling by coring, plant inspections, or CT 109s as allowed by laboratory testing workload. Samples asphalt and concrete for assurance testing.

¹ ESSENTIAL FUNCTIONS are the core duties of the position that cannot be reassigned

MARGINAL FUNCTIONS are the minor tasks of the position that can be assigned to others

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Performs compliance inspections of Asphalt Concrete (AC) Plants and Portland Cement Concrete (PCC) plants during construction projects insuring compliance with plans and specifications of construction project

- 5% (E) Physically assists in the maintenance and calibration of testing machines and equipment on a routine basis.
- 5% (E) Interprets contract specifications and determines applicable tests for samples to meet contract compliance. Performs other duties as required for maintaining and improving a smooth operation of the Redding Materials Lab and North Region Construction.

SUPERVISION EXERCISED OVER OTHERS:

This position has no supervisory responsibilities.

SUPERVISION OR GUIDANCE RECEIVED:

Will be under the direction of the Area Materials Engineer for North Region Construction – North Area, or a Construction Engineer or a Senior Transportation Engineer. Independent action is encouraged with significant decisions and final recommendations concurred by the Laboratory Lead Worker and/or the Area Materials Engineer (or Resident Engineer and/or Construction Engineer).

KNOWLEDGE, ABILITIES AND ANALYTICAL REQUIREMENTS:**Knowledge of, or ability to quickly learn:**

- Soil, asphalt, HMA, concrete and construction materials sampling techniques.
- Test methods used in highway construction and for materials investigation.
- Standards and Practices of materials as practiced by the Department.
- Caltrans Specifications.

Abilities: Must possess good written and oral skills and have the ability to work independently or as a team member. Must be able to work with others in the District, the North Region, the Department, the public, and other agencies to carry out duties.

Analytical Requirements: Requires the analytical ability to interpret specification requirements for materials and ability to perform standardized materials testing procedures. Must be capable of understanding test results and able to recognize deficiencies of materials being tested. Must have the ability to pass tests for Independent Assurance Test Certifications (IAT). Must have basic knowledge of spreadsheets and ability to use them to perform materials testing-related calculation. Basic math skills must include algebra and geometry. Basic writing skills are also mandatory for this job.

CONSEQUENCE OF ERROR/RESPONSIBILITY FOR DECISIONS:

Responsible for the accuracy and completeness of materials sample preparation and physical tests performed. Inaccurate test results can have serious financial and credibility consequences to Caltrans.

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Errors may result in failure of roadbeds, rejection of satisfactory materials, or contractor claims.

PUBLIC AND INTERNAL CONTACTS:

Day to day contacts with Construction or other functional units when receiving samples. Contact with contractors and the public would only be incidental. Must have the ability to coordinate work with other laboratory personnel in an efficient and professional manner, and to be an effective team member.

PHYSICAL, MENTAL AND EMOTIONAL REQUIREMENTS:

Physical Requirements: Employees may be required to stand or sit for long periods of time operating various types of laboratory equipment. They may also be required to move large or cumbersome samples weighing up to 75 lbs repeatedly into and through out the Redding Materials Laboratory. Employees must be able to work in noisy and dusty conditions, and may be required to wear a respirator and safety glasses for their personal protection.

Night work, frequent travel and long-term assignments throughout the North Region may be required. Takes and tests material samples and does other non-professional engineering work as assigned.

Emotional Requirements: Must be able to develop and maintain cooperative working relationships. Incumbent will work as a member of a team.

WORK ENVIRONMENT:

While at the base of operation, employees will work in a partially climate-controlled laboratory under artificial lighting. The employee may be exposed to dust, noise, fumes, chemicals, and heat while performing certain test methods. While working for a Construction Engineer, incumbent will be subject to noise, odors, dust, extreme weather conditions, climate-controlled environment, and artificial lighting, etc. Must work with and about a variety of materials, construction and testing equipment.

Safe work practices must be followed at all times for accident/injury prevention.

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I have read, and understand the duties listed above. If you believe you may require accommodation, please discuss this with your hiring supervisor.

EMPLOYEE (Print)	DATE
EMPLOYEE (Signature)	DATE

I have discussed with and provided a copy of this duty statement to the employee named above.

SUPERVISOR (Print)	DATE
SUPERVISOR (Signature)	DATE